



LOADING FUSION 360

LEO ROBOTICS

TEAMS 141A / B

OVERVIEW

- The goal for this module is to load Autodesk Fusion 360 and be able to open the application
 - This is comprised of 3 lessons:
 1. Windows / MACOS verification (as appropriate). Allocate 1 hour
 2. Licenses. Allocate 30 minutes
 3. Downloading and installing. Allocate 2 hours (depending on Internet speed)
 - No known standard for this lesson, but it is a precursor for all other modules
- **Materials Needed:**
 - Computer with Projector
 - Internet Connection
 - PowerPoint
 - Web Browser
- Autodesk Fusion 360 is needed to allow teams to work through their designs
 - This is especially important during this time of COVID, where virtual learning is part of every students experience
- Lets walk through getting the software loaded

LESSON 1 – COMPUTER VERIFICATION

- This lesson will verify that the computer to load Autodesk Fusion 360 meets the minimum hardware requirements

REQUIREMENTS

- In order to run Autodesk Fusion 360, you will need:
 - Apple macOS Big Sur 11.0*; Catalina 10.15; Mojave v10.14; High Sierra v10.13 or
 - Microsoft® Windows® 8.1 (64 bit) or Windows 10 (64-bit)
 - 64 bit x86-based processor
 - 4 GB RAM
 - 3 GB hard drive space
 - Internet connection

OS REQUIREMENTS

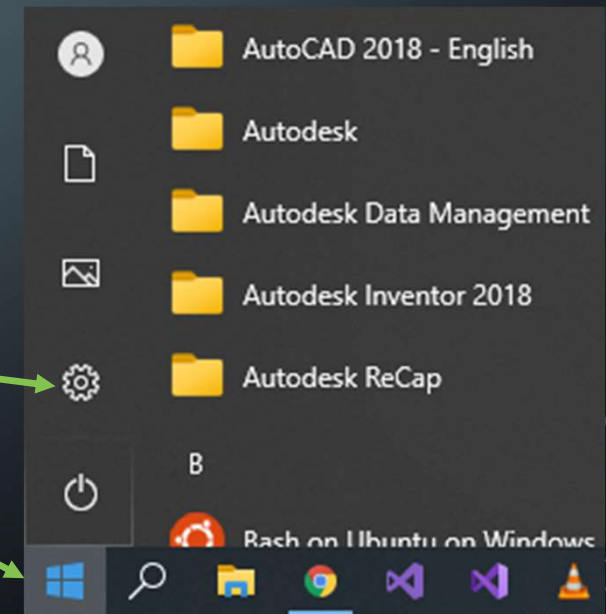
- If you are using a Windows based computer, go to the next slide
- If you are using a MAC OS based computer, go to slide 14
- When complete, go to License lesson



WINDOWS OS

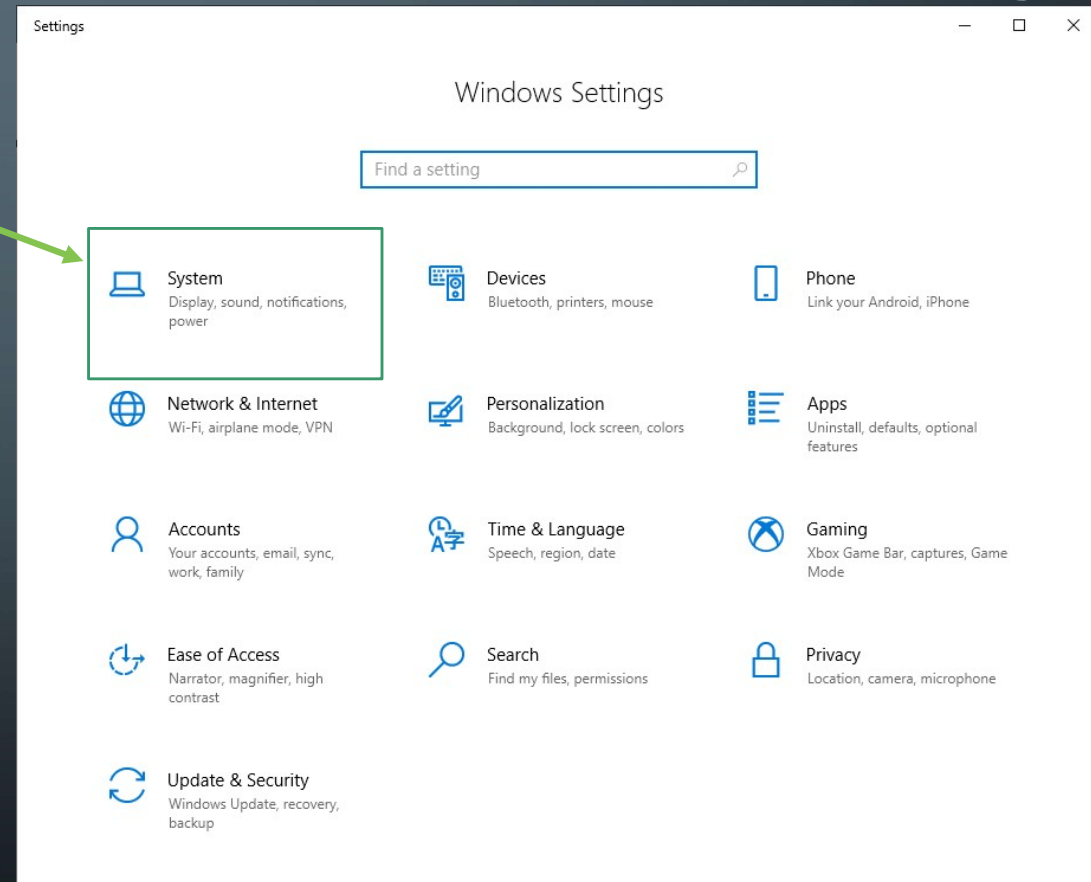
WINDOWS COMPUTERS

- Some computers run 32 bit and others are 64 bit
 - The computers here are all 64 bit, but for those working from home we need to ensure the correct installer is used.
- To determine what version should be used:
 - Press the <Start> button
 - Select the gear



SYSTEM INFORMATION

- In Windows Settings, select System



SYSTEM INFORMATION

- In Settings, select About
- Look on the right panel
 - See System type
- This computer has
 - A 64-bit processor
 - 6 GB RAM
- Press the “X” in the upper corner

Settings

Home

Find a setting

System

- Focus assist
- Power & sleep
- Storage
- Tablet
- Multitasking
- Projecting to this PC
- Shared experiences
- Clipboard
- Remote Desktop
- About

About

Your PC is monitored and protected.

[See details in Windows Security](#)

Device specifications

Device name	Aurora	
Processor	Intel(R) Core(TM) i7 CPU	965 @ 3.20GHz 3.19 GHz
Installed RAM	6.00 GB	
Device ID	D60EC766-A8C2-4A75-AFB3-824C7C7A96BB	
Product ID	00329-10280-00000-AA046	
System type	64-bit operating system, x64-based processor	
Pen and touch	No pen or touch input is available for this display	

Copy

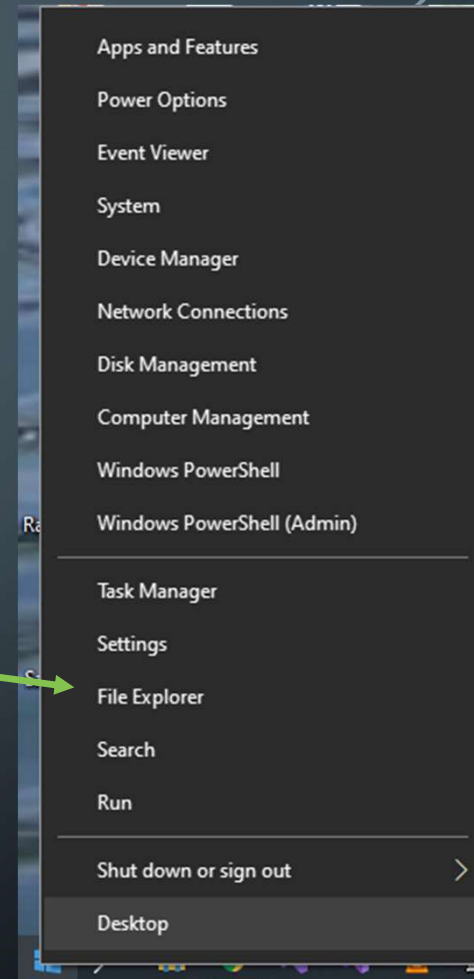
Rename this PC

Windows specifications

Edition	Windows 10 Enterprise
Version	20H2
Installed on	11/21/2020

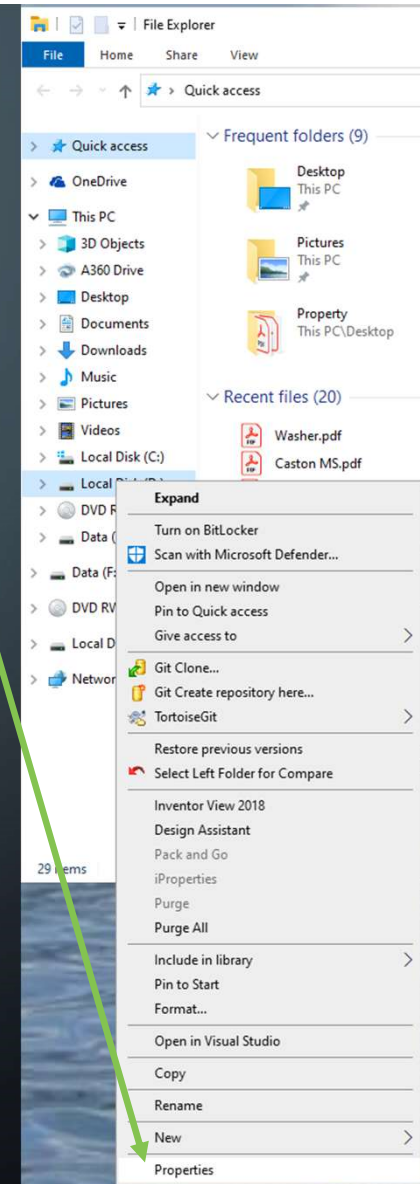
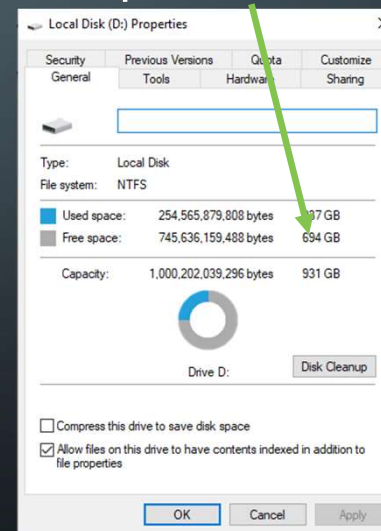
HARD DRIVE SPACE

- Right click on the start button
 - This will show a menu of options
- Select “File Explorer”



HARD DRIVE SPACE

- In File Explorer, right click on the drive where the application is to be installed and select Properties
- In the properties dialog, verify no less than 3GB of space is available
 - This computer has sufficient space

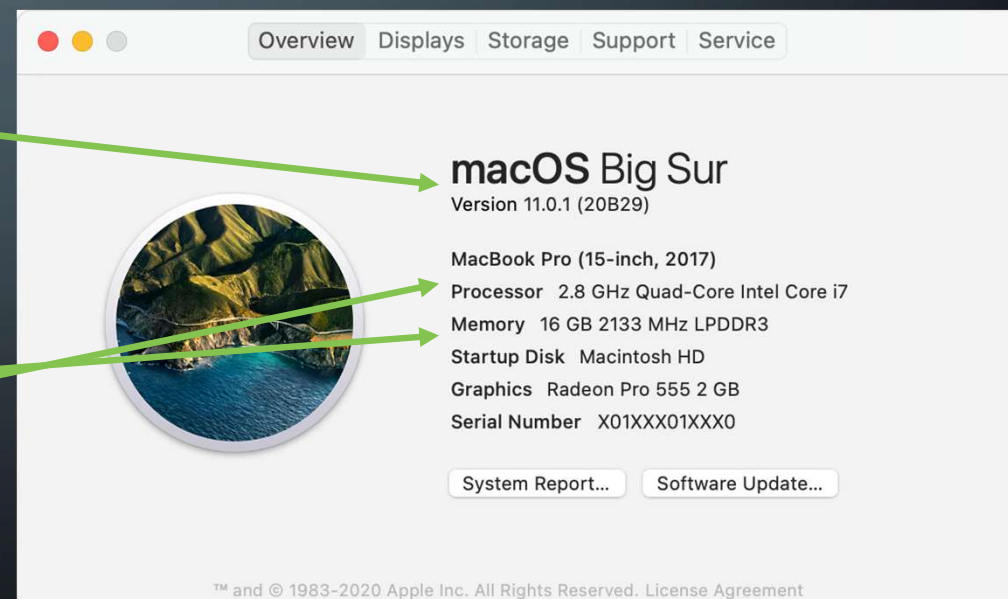


The image features a dark blue, almost black, background. In the center, the word "MACOS" is written in a clean, white, sans-serif font. The corners of the image are decorated with white, stylized circuit board traces and nodes, creating a technical or digital aesthetic.

MACOS

MACOS VERSION

- From the Apple menu in the corner of your screen, choose About This Mac.
- You should see the macOS name, such as macOS Mojave, followed by its version number
- Remember, you will need Apple macOS:
 - Big Sur 11.0*
 - Catalina 10.15
 - Mojave v10.14
 - High Sierra v10.13
- Also verify the amount of memory
 - Need a minimum of 4 GB RAM
- Note your processor



PROCESSOR

- As noted on the previous slide, check your processor name and compare it with the below.
- You will need a 64bit processor

Processor Name	32 or 64-bit
Intel Core Solo	32 bit
Intel Core Duo	32 bit
Intel Core 2 Duo	64 bit
Intel Quad-Core Xeon	64 bit
Dual-Core Intel Xeon	64 bit
Quad-Core Intel Xeon	64 bit
Core i3	64 bit
Core i5	64 bit
Core i7	64 bit

AVAILABLE STORAGE

- The computer will need a minimum of 3 GB hard drive space free
- Click the Storage tab and view the space available



MacBook Pro

104.09 GB available of 250.79 GB

Available
104.09 GB

LESSON 2 - LICENSES

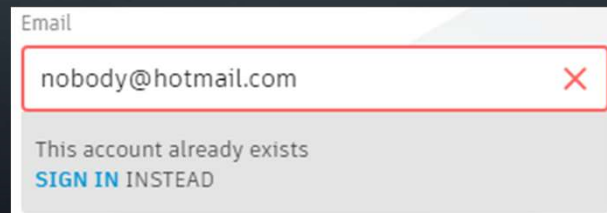
- This lesson will describe the different licenses available and will setup an account based on the student license

IMPORTANT LICENSE INFORMATION

- You may register for several different forms of licenses:
 - Start-up
 - Personal
 - Educational access
 - Fusion 360
 - Commercial license
- For work related to robotics, use Educational access
 - Ref: <https://knowledge.autodesk.com/support/fusion-360/learn-explore/caas/sfdarticles/sfdarticles/How-to-activate-start-up-or-educational-licensing-for-Fusion-360.html>

CREATE ACCOUNT

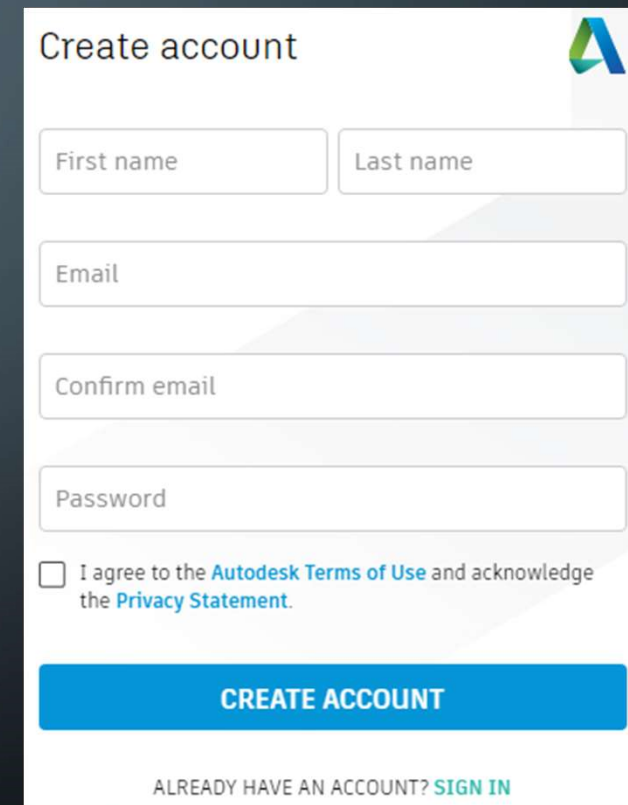
- In a web browser, go to: <https://accounts.autodesk.com/register>
- Enter the requested details.
- Read the Autodesk Terms of Use and Privacy Statement at the bottom of the screen. Use is gated by agreeing to these (acknowledged by checking the box)
- Once the form is filled out, press the CREATE ACCOUNT button
- Open your e-mail. You should see a verification e-mail. Follow the instructions for verifying your account.
- NOTE: If the e-mail address already has been used for an account, the dialog will indicate that the account already exists.
 - Click SIGN IN instead



Email

nobody@hotmail.com

This account already exists
[SIGN IN](#) INSTEAD



Create account

First name Last name

Email

Confirm email

Password

I agree to the [Autodesk Terms of Use](#) and acknowledge the [Privacy Statement](#).

CREATE ACCOUNT

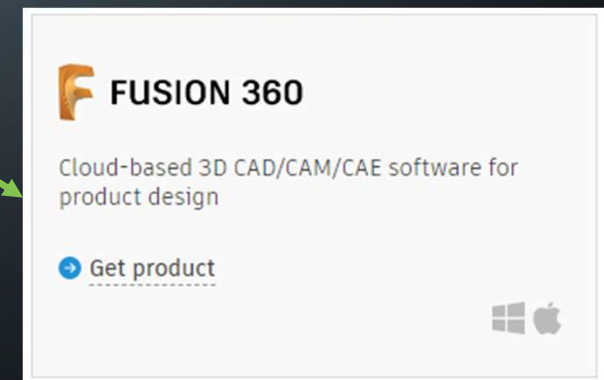
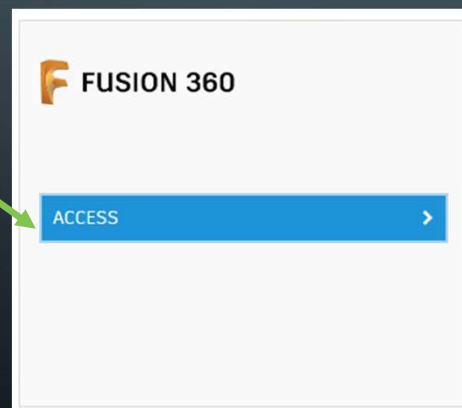
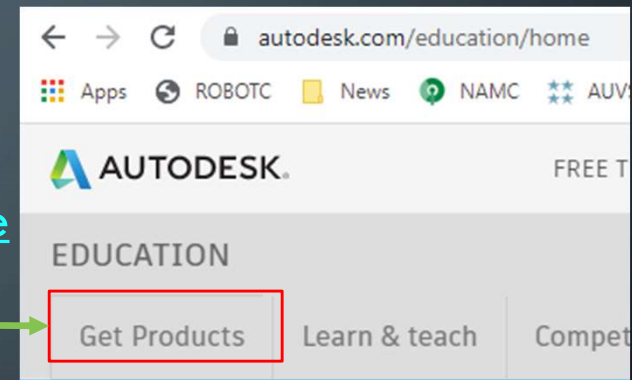
ALREADY HAVE AN ACCOUNT? [SIGN IN](#)

LESSON 3 – DOWNLOADING AND INSTALLING

- With a computer that supports the installation and an account on the Autodesk website, this will walk through downloading and installing the software

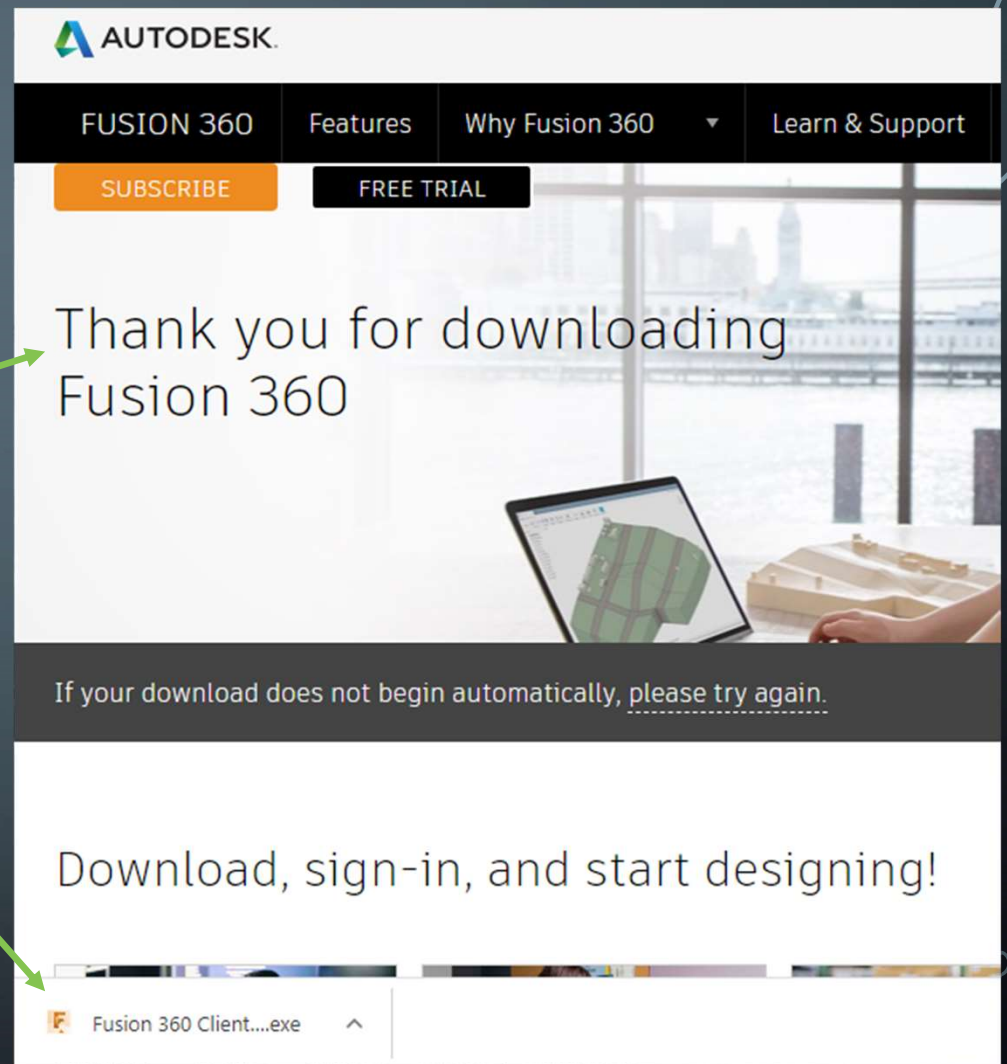
DOWNLOAD

- Open your web browser
- Navigate to: <https://www.autodesk.com/education/home>
- Select the “Get Products” tab
- When the page changes, click on Fusion 360
- Click on ACCESS



DOWNLOAD SUCCESS!

- The page should indicate “Thank you”
- A file will be downloaded



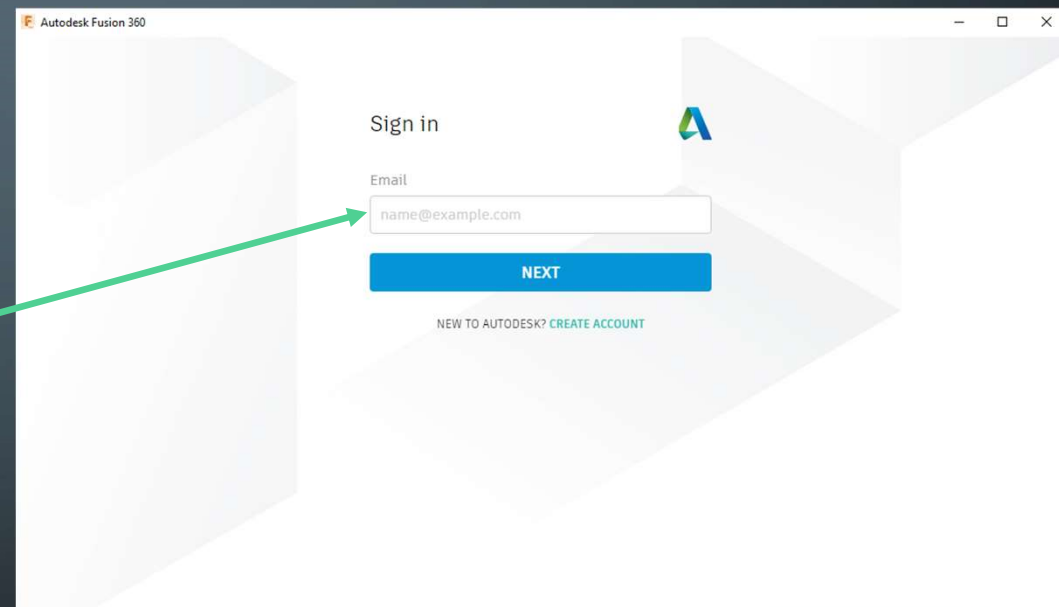
STARTING THE INSTALLER

- Double click on the installer file
- You should see this:
- If prompted for security reasons, acknowledge that it is OK to run.
- Wait for the installer to complete



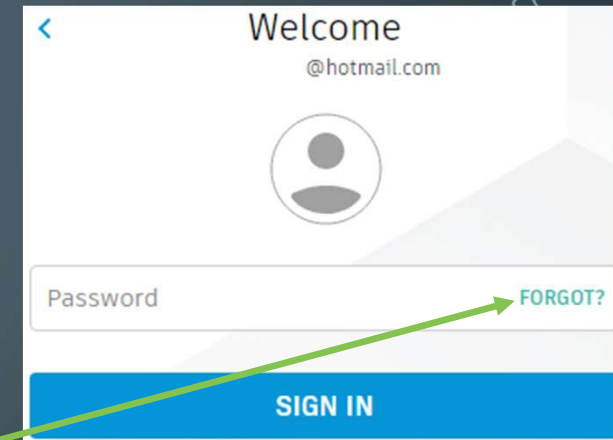
SIGN IN

- Once the installation is complete, you will be prompted for an e-mail address to sign in
- Enter the e-mail information used to setup your account



ENTER PASSWORD

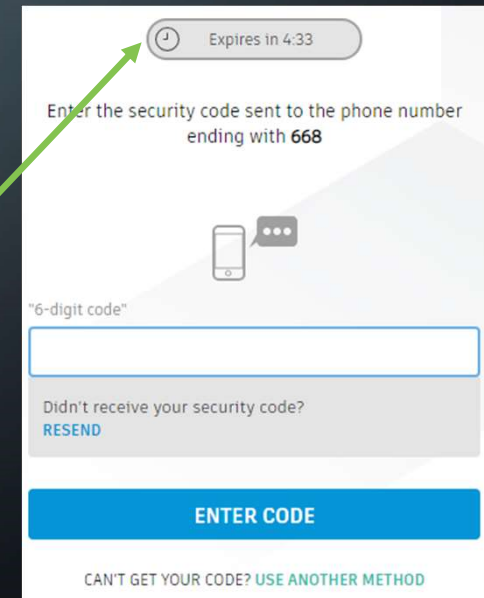
- Once you have your account and have entered your e-mail address, enter your password
 - If you have forgotten your password, press the FORGOT? Link
- Ensure you have access to your mobile phone used to create your account with available
- Press the SIGN IN button
- You will be prompted for a security code. This code should be texted to the mobile device. Enter this 6 digit code and press the ENTER CODE button
 - This must be completed in the allotted time shown at the top of the dialog



Welcome
@hotmail.com

Password [FORGOT?](#)

SIGN IN



Expires in 4:33

Enter the security code sent to the phone number ending with **668**

6-digit code

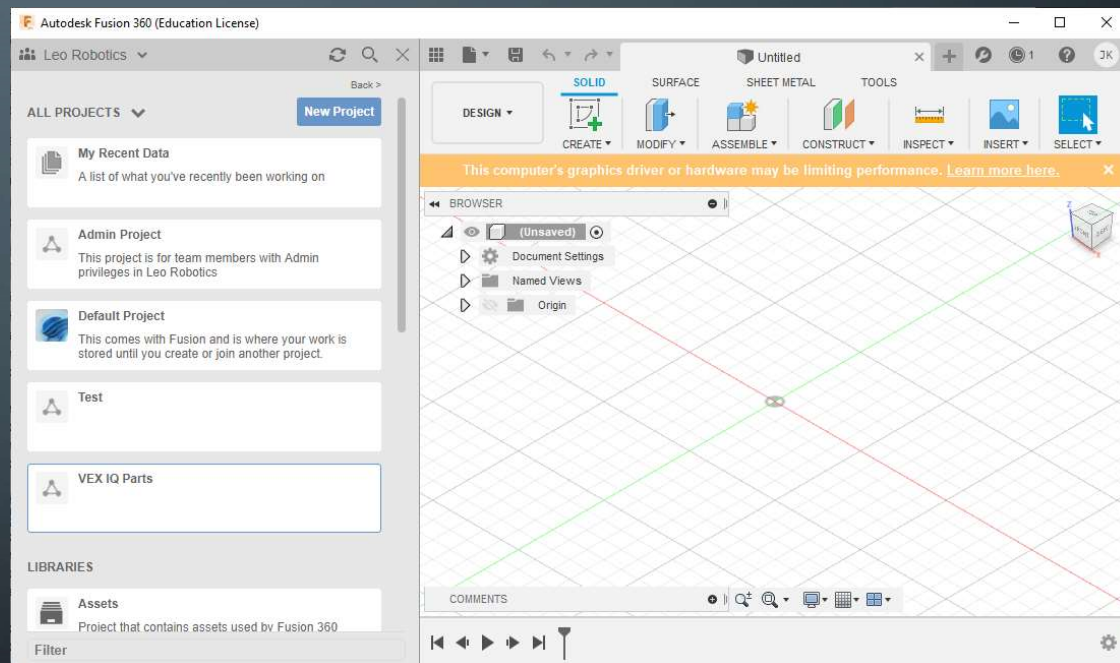
Didn't receive your security code?
[RESEND](#)

ENTER CODE

[CAN'T GET YOUR CODE? USE ANOTHER METHOD](#)

COMPLETED

- You should now be able to view Autodesk Fusion 360



FURTHER STUDENT LEARNING

- After loading the software, open your web browser
- Open <https://academy.autodesk.com/course/129137/fusion-360-design-and-customize-vex-iq-clawbot>
- Start working on Lesson 1: Getting Started

Assessment: Loading Autodesk Fusion 360

Knowledge:

1. Does Autodesk Fusion 360 work on Apple MacOS?
2. Does Autodesk Fusion 360 work on Windows 10?
3. What type of processor is needed to use Autodesk Fusion 360?
4. How much RAM is required?
5. How much hard drive space is required?
6. On Windows, how do you verify the computer in use supports 3, 4 and 5?
7. Will Autodesk Fusion 360 work without an Internet connection?
8. What do you do if you have forgotten your password?

Practical:

Sign in to Autodesk Fusion 360

Knowledge:

1. Does Autodesk Fusion 360 work on Apple MacOS?

Autodesk Fusion 360 works on many different computers and computer programs. Fusion 360 works on Apple MacOS Big Sur 11.0; Catalina 10.15; Mojave v10.14; High Sierra v10.13 or Microsoft® Windows® 8.1 (64 bit) or Windows 10 (64-bit). This range gives almost everyone a chance to use the program.

2. Does Autodesk Fusion 360 work on Windows 10?

Autodesk Fusion 360 works on Windows 10. As long as the Windows 10 computer has 64 bit, Autodesk Fusion 360 will work on the computer.

3. What type of processor is needed to use Autodesk Fusion 360?

Autodesk Fusion 360 requires a 64-bit x86-based processor for the program to function well and accurately.

4. How much RAM is required?

For use, Autodesk Fusion 360 requires 4 GB RAM.

5. How much hard drive space is required?

To work with Autodesk Fusion 360, you need to have 3 GB of hard drive space at least. That means that if you have over 3 GB of hard drive space, Fusion 360 will still work.

6. On Windows, how do you verify the computer in use supports 3, 4 and 5?

Verify system Device Specification under the Settings menu in Windows. This will describe the processor, and RAM memory.

Hard drive storage can be found and verified under the Storage option in Settings. This describes available storage on the hard drive or drives. Hard drive space can also be verified under the Windows File Explorer.

7. Will Autodesk Fusion 360 work without an Internet connection?

For Autodesk Fusion 360 to work, you don't need internet connection at all times. Fusion 360 is a cloud-based product that requires connection with the internet at least every two weeks. The storage is cloud based. If accessing the cloud is not a preferred option, then consider another solution like Autodesk Inventor.

8. What do you do if you have forgotten your password?

If you have forgotten your password, you can click on the "Forgot Password" option while signing in to Autodesk Fusion. A code will be sent to your cell phone by text. This code can be entered within the allotted time to access the account and reset your password.

Reflections

During the period of this season where the COVID-19 pandemic kept us from meeting in person, the team of 141A used Autodesk Fusion 360 to design parts of our robot. As we worked along with the lessons provided, we were able to learn how to work remotely, and better as a team, as it took very detailed communication to design from our individual homes. The lessons helped us get Fusion 360 downloaded, set up, and running. With the provided help, you could easily walk through the entire process of the starting and running of Fusion 360. Fusion 360 had many perks that came along with the program, such as team collaboration. Each of us was able to use the design process to design our own parts/ideas for our robot design. We then analyzed all versions to find the design ideas that best suited the needs of our robot. We were each able to go through and find our own solutions to any problems. This program (Autodesk Fusion 360) helped us find the answers to the requirements needed for our robot to function correctly this season, even if we were apart. We were able to create ideas and solutions, that we could share and build on our team file. Fusion 360 helped us build our robot from the comfort, and safe social distance, of our homes. When we were able to meet in person, we had prototypes of pieces, parts, and ideas for construction to reference. Team 141A agrees that Fusion 360 helped us stay on track during the tough times of the season. While this program was vital during the COVID-19 social distancing mandates, we see it as an important resource for future seasons of VEX IQ. Not only was the program helpful for the times when we were apart, it was also fun and engaging!

